**WHAT IS CLAIMED IS:**

1. An improved web-winding device comprising a generally cylindrical support structure having an outer web wrapping surface for receiving at least one convolution of a web, an inner annular surface joined to said support structure for mating with a web-winding machine, wherein said inner annular surface has a wear rate coefficient of less than about $3.0 \times 10^{-7}$ $m^3/Nm$.

2. The web-winding device recited in claim 1 wherein said inner annular surface comprises a material having a composition including about 20 wt-% glass bead and polybutylene terphthalate.

3. The web-winding device recited in claim 1 wherein said inner annular surface comprises a thermoplastic polyester polybutylene terphthalate resin.

4. The web-winding device recited in claim 1 wherein said inner annular surface comprises a thermoplastic polyester resin blend having polybutylene terphthalate/polycarbonate (PBT/PC).

5. The web-winding device recited in claim 1 wherein said inner annular surface comprises a thermoplastic polyester resin blend having polybutylene terphthalate/polycarbonate-silicone copolymers (PBT/PC).

6. The web-winding device recited in claim 1 wherein said inner annular surface comprises a thermoplastic polyester amorphous polycarbonate (PC) resin.

7. The web-winding device recited in claim 5 wherein said thermoplastic polyester amorphous polycarbonate (PC) resin comprises a filler material of at least 2 wt.-% of a low-density polyethylene resin.

8. The web-winding device recited in claim 1 wherein said thermoplastic polyester resin and thermoplastic polyester resin blends are semi-crystalline.

9. The web-winding device recited in claim 1 wherein said thermoplastic polyester resin and thermoplastic polyester resin blends are modified amorphous resins.

10. The web-winding device recited in claim 7 wherein said filler material comprises a material selected from the group consisting of: PTFE, low density polyethylene, silicone fluids, and fatty acid amides.

11. The web-winding device recited in claim 1 wherein said generally cylindrical support structure has a tensile strength at 3.2 mm of about 52 MPa.

12. The web-winding device recited in claim 9 wherein said generally cylindrical support structure has a tensile elongation at 3.2 mm of about 200 percent.

13. The web-winding device recited in claim 10 wherein said generally cylindrical support structure has a flexural strength at 3.2 mm of at least 83 MPa.

14. The web-winding device recited in claim 11 wherein said generally cylindrical support structure has a flexural modulus at 3.2 mm of about 2,300 MPa.

15. The web-winding device recited in claim 12 wherein said generally cylindrical support structure has a Rockwell R hardness of about 117.